

# Prateek Kumar

Software Developer

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## EDUCATION

### Indian Institute of Technology

Bachelor of Technology in Engineering Science, Major in Computer Science

Jodhpur, Rajasthan

10/2022 – 05/2026

## EXPERIENCE

### United Techlab

05/2025 – 07/2025

Software Development Intern

Remote

- Generative AI Architecture:** Architected an advanced prompt chaining workflow using the Gemini API to analyze business context and generate tailored positive/negative prompts, driving a Runware diffusion model to create high-quality, brand-aligned marketing assets.
- Scalable Media Infrastructure:** Engineered a robust image processing system that converts Base64 streams from AI models into optimized files stored in AWS S3, with metadata indexing in the database to enable secure and instant asset retrieval.
- Full-Stack Product Leadership:** Spearheaded the end-to-end development of 'Adgen', automating content scheduling across YouTube, LinkedIn, Facebook, and Instagram, which successfully reduced client manual operational time by 90%.
- Agile Collaboration:** Operated within an Agile/Scrum framework, actively participating in sprint planning and daily stand-ups to streamline cross-functional communication and align technical deliverables with product requirements.
- DevOps & CI/CD:** Established serverless CI/CD pipelines using AWS Amplify and Lambda, reducing deployment latency by 75% through automated build verification and release protocols.
- Technologies:** Next.js, FastAPI, DynamoDB, Redux, Axios, OAuth 2.0, JWT, AWS Lambda, Amplify, S3 Bucket, Tailwind, Shadcn, Git/GitHub, CI/CD

## PROJECTS

### CarZone - Car Management System | [Github](#)

07/2025 – 08/2025

- Hexagonal Architecture Implementation:** Architected a modular, production-grade RESTful API in Go (1.24) using Hexagonal Architecture. Decoupled core business logic from external dependencies to ensure high testability and maintainability across 25+ endpoints.
- Secure Financial Pipeline:** Integrated Razorpay for end-to-end payment processing, implementing HMAC SHA256 signature verification and asynchronous webhook handlers to guarantee 100% transaction integrity and prevent payment spoofing.
- Concurrency & State Management:** Engineered a finite state machine (FSM) booking engine to handle complex order lifecycles (Pending → Confirmed → Completed). Utilized database transactions to prevent race conditions and ensure accurate real-time availability tracking.
- Observability & Monitoring:** Deployed a comprehensive observability stack using Prometheus for metric collection and Jaeger for distributed tracing, enabling real-time visualization of API latency and request bottlenecks.
- Technologies:** Go, PostgreSQL, Gorilla Mux, JWT, Prometheus, OpenTelemetry, Jaeger, Docker, Git/GitHub

## TECHNICAL SKILLS

**Languages:** JavaScript (ES6+), TypeScript, Python, C++, C, SQL, R

**Frameworks:** MERN Stack (MongoDB, Express, React, Node), Next.js, T3 Stack, FASTAPI

**Libraries:** Redux, Tailwind, Shadcn UI, Framer Motion, GSAP

**Database Systems:** MongoDB, PostgreSQL, DynamoDB, Prisma ORM, Mongoose ODM, Redis

**Developer Tools:** VS Code, Postman, Figma, Cloudinary, npm/yarn

**DevOps & Deployment:** CI/CD, AWS (Lambda, Amplify, IAM), Vercel, Netlify, Git/GitHub

## ACHIEVEMENTS AND LEADERSHIP

**2022:** Ranked in top 8% of 1 million candidates in nationwide JEE Mains engineering entrance examination.

**2023:** Mentored 11 students to familiarize them with the culture and environment of IIT Jodhpur

**2023:** Exhibited a Landmine Detection System at a DRDO Exhibition, demonstrating a prototype designed for safe identification of buried landmines using sensor-based detection.

**2024:** Managed 200+ volunteers and INR 3.75M budget for sports festival with 10,000+ participants, leaded WebD team with 2,000+ users.